

Appin. No. 09/840,193
Amendment dated December 8, 2006
Reply to Office Action of August 24, 2006

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REMARKS/ARGUMENTS

Reconsideration of the present application, as amended, is respectfully requested.

The August 24, 2006 Office Action and the Examiner's comments have been carefully considered. In response, an interview was conducted with Examiner Edwards on October 30, 2006, claims are amended and remarks are set forth below in a sincere effort to place the present application in form for allowance. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

ALLOWABLE SUBJECT MATTER

The Examiner's indication that claim 35 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims is acknowledged.

Claim 35 is not rewritten in independent form at this time. Applicant does, however, reserve the right to present claim 35 in independent form if the claim upon which claim 35 is dependent is ultimately held to be unpatentable.

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PRIOR ART REJECTIONS

In the Office Action claims 2-5 and 33 are rejected as being obvious and unpatentable over USP 6,335,980 (Armato, III et al.). Claims 8 and 34, while not specifically included in the rejection of claims 2-5 and 33, also appear to be rejected as being obvious over Armato, III et al. Claims 6 and 7 are rejected as being obvious over Armato, III et al. in view of USP 6,493,458 (Yasui et al.). Claim 9 is rejected under 35 USC 103 as being unpatentable over Armato, III et al., and further in view of USP 6,594,380 (Shinbata).

In response, independent claim 33 is amended to more clearly define the present claimed invention over the cited references.

The present claimed invention as defined by amended claim 33 is directed to a radiation image processing apparatus which includes an object region extracting section to extract an object region, a contour recognizing section to determine to which one of the plurality of different contour types the contour of the object region belongs, and an image processing section that selects one of the plurality of different image processing conditions in accordance with the determined one of the plurality of different contour types and conducts an image processing for the radiation image data of the radiographed body based on the

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selected one of the plurality of different image processing conditions (see claim 33, lines 22-28).

As described from page 4, line 6 to page 5, line 18 of the present application, in radiographing used for diagnosis, image processing conditions for obtaining optimum images for diagnoses vary depending upon the body parts radiographed, because the region being studied by a doctor varies so as to cover many body part types.

The number of different kinds of radiographed body parts is generally 100 or more, and it is difficult for a radiographer to input a separate image processing condition for each radiographed body part.

The present claimed invention determines to which one of the plurality of different contour types the contour of the object region of the radiographed body part belongs, selects the one of the plurality of different image processing conditions in accordance with the determined one of the plurality of different contour types and conducts an image processing for the radiation image data of the radiographed body part based on the selected one of the plurality of image processing conditions (see page 85, line 17 to page 86, line 15 of the present application).

As a result of the present claimed invention, the radiographer can be relieved of the complicated requirement of

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inputting an image processing condition for each radiographed body part.

In rejecting claim 33 the Examiner relies on Armato, III et al. Armato, III et al. teach a method for the automated segmentation of the lung regions in a lateral chest radiograph. Armato, III et al. teach only about the chest among various body parts, and do not teach structure to determine which one of a plurality of predetermined different contour types corresponding to a plurality of different kinds of body parts including an abdomen and a leg the radiographed body part belongs, and do not teach structure which selects one of the plurality of different image processing conditions in accordance with the determined one of the plurality of different contour types and conducts an image processing for the radiation image data of the radiographed body part based on the selected one of the plurality of image processing conditions (see claim 33, lines 22-28).

Furthermore, as disclosed at column 2, lines 4-10 of Armato, III et al., Armato, III et al. merely teach that radiographic characteristics of the retrosternal clear space and the retrocardiac region of the lateral chest images could be automatically analyzed to assess conditions such as emphysema, cardiomegaly, or pleural effusion, or nodule candidates selected by current PA-image-based lung nodule detection schemes could be

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confirmed based on analysis of corresponding regions in the lateral image.

Accordingly, Armato, III et al. do not disclose, teach or suggest structure that selects one of the plurality of different image processing conditions in accordance with the determined one of the plurality of different contour types and conducts an image processing for the radiation image data of the radiographed body part based on the selected one of the plurality of image processing conditions.

Therefore, the above-mentioned advantage of the present invention that a radiologist need not input an image processing condition for each radiographing, would not have been obvious in view of the teachings of Armato, III et al.

In view of the foregoing, claim 33 is patentable over Armato, III et al. under 35 USC 102 as well as 35 USC 103.

None of the other references of record close the gap between the present claimed invention as defined by amended claim 33 and Armato, III et al. Therefore, claim 33 is patentable over all of the references of record when taken either alone under 35 USC 102 or in combination under 35 USC 103.

Claims 2-9, 33 and 35 are either directly or indirectly dependent on claim 33 and are patentable over the cited references in view of their dependence on claim 33 and because

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the references do not disclose, teach or suggest each of the limitations set forth in the dependent claims.

In view of all of the foregoing, claims 2-9 and 33-35 are in form for immediate allowance, which action is earnestly solicited.

* * * * *


Entry of the claim amendments, allowance of the claims, and the passing of this application to issue are respectfully solicited.

If the Examiner disagrees with any of the foregoing, the Examiner is respectfully requested to point out where there is support for a contrary view.

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If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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Encl: Petition for Extension of Time